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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of	:	Customer Number: 46320
	:	
Kwasi ASARE, et al.	:	Confirmation Number: 3074
	:	
Application No.: 10/725,728	:	Group Art Unit: 2191
	:	
Filed: December 2, 2003	:	Examiner: A. Khatri
	:	

For: SCRIPT GENERATION ENGINE AND MAPPING SEMANTIC MODELS FOR
        TARGET PLATFORM

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed September 11,

2007, wherein Appellants appeal from the Examiner's rejection of claims 1-17.

I. REAL PARTY IN INTEREST

This application is assigned to IBM Corporation by assignment recorded on April 26,

2004, at Reel 014572, Frame 0465.

II. RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals and interferences.

III. STATUS OF CLAIMS

Claims 1-17 are pending and two-times rejected in this Application, and it is from the multiple rejections of claims 1-17 that this Appeal is taken.

IV. STATUS OF AMENDMENTS

The claims have not been amended subsequent to the imposition of the Second Office Action dated June 11, 2007 (hereinafter the Second Office Action).

V. SUMMARY OF CLAIMED SUBJECT MATTER

Referring to Fig. 1 and to independent claim 1, an application component distribution system includes a repository 120, a mapping 110, and a script generation engine 200. The repository 120 of semantic models are for interdependent ones of application components 130 (lines 4-10 of paragraph [0023] of Appellants' disclosure). The mapping 110 of individual listings in the semantic models are to target platform 190 specific installation instructions (lines 1-5 of paragraph [0024]). The script generation engine 200 is configured to produce a target specific set of instructions 160 for a specified application component based upon a mapping of at least one of the semantic models in the repository 120 (lines 6-14 of paragraph [0024]).

Referring to Fig. 2 and to independent claim 5, and script generation engine 200 comprises a communicate coupling, a mapping, and a script composition processor. The communicative coupling is to a repository 250 of semantic models 260 for interdependent ones of application components configured for installation in a target platform 210 (lines 5-11 of paragraph [0028]). The mapping of individual listings in the semantic models 260 are to specific installation instructions 270 for specific target platforms 210 (lines 6-7 of paragraph [0026]).

The script composition processor is programmed to produce a specific set of instructions 240 for installing a specified one of the interdependent application components 220, 230 in a specified one of the target platforms based upon the mapping (lines 5-8 of paragraph [0028]).

Referring to Fig. 3 and to independent claims 8 and 13, a method for generating an installation script for installing an application component to a specific target platform is disclosed. In block 330, a semantic model for the application component is retrieved from a communicatively coupled repository of semantic models (lines 4-5 of paragraph [0030]). In block 340, a set of dependent components required to be present in the specific target platform are determined from the semantic model (lines 5-10 of paragraph [0030]). In block 350, a set of resource requirements required to be met by the specific target platform are further determined from the semantic model (lines 1-9 of paragraph [0031]). In block 370, the set of dependent components and the set of resource requirements are mapped into platform specific instructions in a platform specific installation script (lines 4-10 of paragraph [0032]).

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 1-17 were rejected under 35 U.S.C. § 101.

1 **VII. ARGUMENT**

2 **THE REJECTION OF CLAIMS 1-17 UNDER 35 U.S.C. § 101**

3   For convenience of the Honorable Board in addressing the rejections, claims 2-4 stand or

4 fall together with independent claim 1; claims 6-7 stand or fall together with independent claim

5 5; claims 9-12 stand or fall together with independent claim 8; and claims 14-17 stand or fall

6 together with independent claim 13.

7

8   In the paragraph spanning pages 2 and 3 of the First Office Action dated February 2,

9 2007 (hereinafter the First Office Action), the Examiner asserted the following:

10 *Analysis*: Claims 1-17 disclosed by the applicant as being "an application component distribution
11 system...". Since the claims are each a series of steps to be performed on a computer the processes
12 must be analyzed to determine whether they are statutory under 35 USC 101. Examiner interprets
13 that the claims 1-17 are non-statutory because claims are program for processing set of
14 instructions arid configured to produce set of instructions therefore computer program itself is not
15 a process so its functionality can not be realized. Therefore, claims 1-17 are merely a manipulating
16 of a registry and mapping program listing which is not able to produce a useful results and
17 practical application. Thus claims 1-17 are non-statutory and rejected under 35 USC 101.
18
19 In the Amendment dated May 2, 2007 (hereinafter the Amendment), Appellants noted that the

20 Examiner's analysis is not consistent with the law described by Federal Circuit or the Board of

21 Patent Appeals and Interferences and that the Examiner has failed to follow the procedure

22 outlined in the M.P.E.P. with regard to rejecting claims under 35 U.S.C. § 101.

23

24   For example, referring to M.P.E.P. § 2106(II)(A):

25 Office personnel have the burden to establish a *prima facie* case that the claimed invention as a
26 whole is directed to solely an abstract idea or to manipulation of abstract ideas or does not produce
27 a useful result. Only when the claim is devoid of any limitation to a practical application in the
28 technological arts should it be rejected under 35 U.S.C. 101. Compare *Musgrave*, 431 F.2d at 893,
29 167 USPQ at 289; *In re Foster*, 438 F.2d 1011, 1013, 169 USPQ 99, 101 (CCPA 1971). Further,
30 when such a rejection is made, Office personnel must expressly state how the language of the
31 claims has been interpreted to support the rejection.
32

1   The Examiner, however, has already admitted that the claimed invention produces a useful result

2   (i.e., "configured to produce set of instructions").

3

4   Appellants also noted in the Amendment that the U.S. Patent Office has already issued

5   thousands, if not tens of thousands of patents, which include similar types of claims to that

6   recited in claims 1, 5, 8, and 13 since the Federal Circuit's decision of <u>State Street Bank & Trust</u>

7   <u>Co. V. Signature Financial Group, Inc.</u>[1] Although issued prior the <u>State Street Bank</u> decision,

8   reference was made in the Amendment to U.S. Patent No. 5,333,184 (hereinafter the '184

9   patent). Claim 1 of the '184 patent is reproduced below:

10   1.   A method for use in a telecommunications system in which interexchange

11   calls initiated by each subscriber are automatically routed over the facilities of a

12   particular one of a plurality of interexchange carriers associated with that

13   subscriber, said method comprising the steps of:

14   generating a message record for an interexchange call between an

15   originating subscriber and a terminating subscriber, and

16   including, in said message record, a primary interexchange carrier (PIC)

17   indicator having a value which is a function of whether or not the interexchange

18   carrier associated with said terminating subscriber is a predetermined one of said

19   interexchange carriers.

20

21 Upon reviewing this claim, it is readily apparent the claims merely describe manipulating data

22 (e.g., the message record). However, if the Examiner's analysis on page 2 of the First Office

23 Action was followed at the time the application, which matured into the '184 patent, was

24 examined, then this claim would have been rejected under 35 U.S.C. § 101.

25

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[1] 149 F.3d 1368, 47 USPQ2d 1596 (Fed. Cir. 1999).

1   Appellants referred to the '184 patent because this patent was the subject of the decision

2   by the Federal Circuit in <u>AT&T Corp. v. Excel Communications, Inc.</u>[2] The conclusion of the

3   Federal Circuit with regard to the '184 patent is "we find that the claimed subject matter is

4   properly within the statutory scope of 101."

5

6   Appellants also note that both independent claims 1 and 5 recite "a script generation

7   engine <u>configured to produce</u> a target specific set of instructions" (emphasis added). Thus, not

8   only does the claim invention produce a useful, concrete, and tangible result, these claims

9   specifically recite the useful, concrete, and tangible result being produced. The preamble of

10   independent claims 8 and 13, which recite a method "generating an installation script," also

11   specifically recite a useful, concrete, and tangible result being produced by the claimed

12   invention.

13

14   In first full paragraph on page 3 of the Office Action, the Examiner further asserted the

15   following:

16   Analysis: Claims 13-17 disclosed by the applicant as being a "a machine readable storage...".
17   Further, examiner interprets that claims 13-17 are not limited to tangible embodiment, instead
18   being defined as including both tangible embodiments (e.g., [computer readable medium]) and
19   intangible embodiments (e.g., [transmission media, radio frequency (RF), infrared (IR), a carrier
20   wave, telephone line; a signal, etc.]). As such, the claim is not limited to statutory subject matter
21   and is therefore non-statutory. To overcome this type of 101 rejection the claims need to be
22   amended to include only the physical computer media and not a transmission media or other
23   intangible or non-functional media.
24
25   In response, Appellants noted in the Amendment that the Examiner's "analysis" is in error.

26   Although the Examiner asserts that the claimed "machine readable <u>storage</u>" (emphasis added)

27   may include "intangible embodiments" such as "transmission media, radio frequency (RF),

28   infrared (IR), a carrier wave, telephone line; a signal, etc," the Examiner has neither provided

---

[2] 172 F.3d 1352, 50 USPQ2d 1447 (Fed. Cir. 1999).

1   factual support for this assertion or a reasoned explanation that supports this assertion.

2   Appellants are unaware as to how "transmission media, radio frequency (RF), infrared (IR), a

3   carrier wave, telephone line; a signal" could be considered by one having ordinary skill in the art

4   as being "storage." These "intangible embodiments" described by the Examiner are used in the

5   transmission of data, not the storage of data. Thus, the Examiner's analysis is flawed.

6

7   _____

8   The Examiner's response to these above-reproduced arguments is varied. Initially, the

9   Examiner asserted the following in the fourth enumerated paragraph on page 2 of the Second

10 Office Action:

11   Claims 1-17 stand rejected under 35 U.S.C. 101 because they disclose a claimed
12   invention that is an abstract idea as defined in the case *In re Warmerdam*, 33, F 3d 1354, 31 USPQ
13   2d 1754 (Fed. Cir. 1994).
14
15 The Examiner appears to be unaware of the fact pattern surrounding the decision in In re

16 Warmerdam since this decision does not support the Examiner's analysis.

17

18   As noted by the Federal Circuit in the AT&T Corp. decision, the process claims at issue

19 in In re Warmerdam "did nothing more than manipulate basic mathematical constructs" and the

20 court's decision was founded on the basis that "taking several ideas and manipulating them

21 together adds nothing to the basic equation." The claim to a data structure found to be

22 nonstatutory subject matter in In re Warmerdam did not just involve the manipulation of a data

23 structure. Instead, the claim was to a data structure, *per se*. Specifically claim 6 recited "[a] data

24 structure generated by the method of any of Claims 1 through 4." Since Appellants' present

25 invention neither manipulates "basic mathematical constructions" nor claims a data structure, per

1   se, then Appellants respectfully submit that the Examiner has inappropriately relied upon <u>In re</u>

2   <u>Warmerdam</u> to support the Examiner's analysis.

3

4   The Examiner then asserted the following in the paragraph spanning pages 2 and 3 of the

5   Second Office Action:

6   It was noted that claims 1-17 are involved in application component distribution system.
7   <u>Applicant submits no substance to the claims so its functionality can be realized.</u> Claims are
8   merely with semantic models and script engine with set of instructions manipulating semantic
9   models are in repository. Applicant also admits that claims 1 and 5 recites "a script generation
10   engine configured to produce..." Therefore, claim 1-17 are non-statutory because claim recites
11   computer program which is set of instruction and are program, per se i.e. the description or
12   expressions of the program are not physical things nor are they statutory process as they do not act
13   being performed. Computer programs do not define any structural and functional interrelationship
14   between the computer program and other claimed aspect of the invention which permits the
15   computer program's functionality could be realized. Therefore, computer program is merely a set
16   of instructions capable of being executed by a computer, the computer program itself is not a
17   process. Therefore, claims 1-17 are set of instruction for manipulating contents of the registry and
18   not able to produce useful results and derive any practical application. Thus claims 1-17 stand
19   rejected under 35 U.S.C. 101.
20

21   As the outset, Appellants draw the Honorable Board's attention to the Examiner's

22 statement that "Applicant submits no substance to the claims so its functionality can be realized."

23 The Examiner appears to be improperly importing the enablement requirement for the

24 specification, found in the first paragraph of 35 U.S.C. § 112, to the claims. The claims,

25 however, are only required to "particularly [point] out and distinctly [claim] the subject matter

26 which the applicant regards as his invention."[3] Thus, the claims are not required to "enable" the

27 practice of the claimed invention. Instead, "[t]he specification shall contain a written description

28 of the invention ... to enable any person skilled in the art ... to make and use the same."[4]

29

---

[3] Second paragraph of 35 U.S.C. § 112.
[4] First paragraph of 35 U.S.C. § 112.

1   Appellants are unaware of any computer system that is capable of operating (i.e., so as to

2   have the functionality of the computer realized) without some kind of a power supply. However,

3   Appellants are unaware of any requirement that the claims directed to computer systems are also

4   required to recite a power supply "so its functionality can be realized." Thus, Appellants

5   respectfully submit that the Examiner is setting forth a requirement that is not required by

6   statutory or case law.

7

8   Based upon the Examiner's analysis, it is readily apparent that the Examiner

9   misunderstands exactly what constitutes a computer program or software *per se*. In particular,

10   Appellants respectfully submit that the Examiner is confused as to exact meaning of the phrase

11   "per se." The definition of "per se" is the following:[5]

12   By itself; in itself; taken alone; by means of itself; through itself; inherently; in isolation;
13   unconnected with other matters; simply as such; in its own natures without reference to its
14   relation.
15
16   Thus, software *per se* is an abstract idea embodied by the software alone without anything else.

17   For this reason, software *per se* is deemed to be non-statutory subject matter. For example, the

18   claim at issue within <u>In re Warmerdam</u> was to a data structure, *per se*. Specifically claim 6

19   recited "[a] data structure generated by the method of any of Claims 1 through 4." Thus, claim 6

20   of <u>In re Warmerdam</u> was directed to a data structure, <u>in isolation</u>. The claims of the present

21   application, however, are not directed to either a data structure or computer program, in isolation.

22

23   In contrast, the claimed invention, as recited in claims 1 and 5, is directed to a system

24   and script generation engine, and the claimed system and script generation engine respectively

25   both include <u>structural</u> and <u>functional</u> components. For example, claim 1 recites a repository

---

[5] Black's Law Dictionary 1142 (6th ed. 1990).

1   (i.e., a storage device) and "a script generation engine configured to produce ...", and claim 5

2   recites "a script composition processor programmed to produce a specific set of instructions."

3   For the Examiner to assert that these claims are directed to a computer program *per se*

4   completely ignores the claim limitations.

5

6   Abstract ideas (i.e., software *per se*) are incapable, for example, of acting as a repository

7   since an abstract idea is ethereal without form. Moreover, abstract ideas are incapable of

8   producing a target specific set of instructions because abstract ideas are non-functional. Abstract

9   ideas are also not a script composition processor, which is also a device. In this regard,

10   Appellants respectfully submit that the Examiner's analysis appears to ignore the necessity that

11   for the claimed application component distribution system and script generation engine to be

12   functional, they both must be connected to hardware.

13

14   The Examiner's comments do not address independent claim 8, which recites a method

15   and is clearly statutory subject matter. As to independent claim 13 and the Examiner's assertion

16   that the phrase "machine readable storage" includes transmission media, the Examiner apparently

17   has not recognized that the initial burden of establishing a prima facie case rests with the

18   Examiner, not Appellants, and thus, the Examiner has the burden of supplying factual support for

19   the Examiner's assertion. The Examiner's assertion that the phrase "machine readable storage"

20   includes transmission media lacks both factual support and common sense. In this regard, the

21   Examiner appears to not understand the difference between storage media and transmission

22   media.

23

1   Also, a computer usable/readable medium is an article of manufacture and, thus, is

2   statutory. In this regard, reference is made to M.P.E.P. § 2106.01, which states:

3   When functional descriptive material is recorded on some computer-readable medium, it becomes
4   structurally and functionally interrelated to the medium and will be statutory in most cases since
5   use of technology permits the function of the descriptive material to be realized.
6

7   Therefore, for the reasons stated above, Appellants respectfully submit that the Examiner

8   has not set forth a proper rejection of claims 1-17 under 35 U.S.C. § 101.

9

Conclusion

Based upon the foregoing, Appellants respectfully submit that the Examiner's rejection under 35 U.S.C. § 101 is not viable. Appellants, therefore, respectfully solicit the Honorable Board to reverse the Examiner's rejection under 35 U.S.C. § 101.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due under 37 C.F.R. §§ 1.17, 41.20, and in connection with the filing of this paper, including extension of time fees, to Deposit Account 09-0461, and please credit any excess fees to such deposit account.

Date: September 11, 2007   Respectfully submitted,

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VIII. CLAIMS APPENDIX

1. An application component distribution system comprising:

a repository of semantic models for interdependent ones of application components;

a mapping of individual listings in said semantic models to target platform specific installation instructions; and,

a script generation engine configured to produce a target specific set of instructions for a specified application component based upon a mapping of at least one of said semantic models in said repository.

2. The application component distribution system of claim 1, wherein each of said semantic models comprises a listing of component relationships, target platform requirements and platform neutral installation instructions.

3. The application component distribution system of claim 2, wherein said component relationships comprises at least one component relationship selected from the group consisting of a containment relationship, a usage relationship, a contradiction relationship, and an equivalence relationship.

4. The application component distribution system of claim 1, further comprising a Web services interface to said repository configured to permit remote access to said repository.

5. A script generation engine comprising:

a communicative coupling to a repository of semantic models for interdependent ones of application components configured for installation in a target platform;

a mapping of individual listings in said semantic models to specific installation instructions for specific target platforms; and,

a script composition processor programmed to produce a specific set of instructions for installing a specified one of the interdependent application components in a specified one of said target platforms based upon said mapping.

6. The script generation engine of claim 5, wherein each of said semantic models comprises a listing of component relationships, target platform requirements and platform neutral installation instructions.

7. The script generation engine of claim 6, wherein said component relationships comprises at least one component relationship selected from the group consisting of a containment relationship, a usage relationship, a contradiction relationship, and an equivalence relationship.

8. A method for generating an installation script for installing an application component to a specific target platform, the method comprising the steps of:

retrieving a semantic model for the application component from a communicatively coupled repository of semantic models;

determining from said semantic model, a set of dependent components required to be present in the specific target platform;

further determining from said semantic model a set of resource requirements required to be met by the specific target platform; and,

mapping said set of dependent components and said set of resource requirements into platform specific instructions in a platform specific installation script.

9. The method of claim 8, further comprising the steps of:

yet further determining from said semantic model a set of platform neutral installation operations; and,

further mapping said set of platform neutral installation operations into said platform specific instructions.

10 The method of claim 8, wherein the determining step comprises the steps of:

identifying a set of dependent components for the application component; and,

further identifying a set of sub-dependent components for at least one of said dependent components.

11. The method of claim 10, further comprising the step of repeating the identifying and further identifying steps for each dependent and sub-dependent component in a hierarchy of dependent components for the application component.

12. The method of claim 8, wherein the further determining step comprises the step of computing an composite set of resource requirements for the application component and for said set of dependent components.

13.   A machine readable storage having stored thereon a computer program for generating an installation script for installing an application component to a specific target platform, the computer program comprising a routine set of instructions when executed cause the machine to perform the steps of:

retrieving a semantic model for the application component from a communicatively coupled repository of semantic models;

determining from said semantic model, a set of dependent components required to be present in the specific target platform;

further determining from said semantic model a set of resource requirements required to be met by the specific target platform; and,

mapping said set of dependent components and said set of resource requirements into platform specific instructions in a platform specific installation script.

14. The machine readable storage of claim 13, further comprising the steps of:

yet further determining from said semantic model a set of platform neutral installation operations; and,

further mapping said set of platform neutral installation operations into said platform specific instructions.

15. The machine readable storage of claim 13, wherein the determining step comprises the steps of:

identifying a set of dependent components for the application component; and,

further identifying a set of sub-dependent components for at least one of said dependent components.

16. The machine readable storage of claim 15, further comprising the step of repeating the identifying and further identifying steps for each dependent and sub-dependent component in a hierarchy of dependent components for the application component.

17. The machine readable storage of claim 13, wherein the further determining step comprises the step of computing an composite set of resource requirements for the application component and for said set of dependent components.

IX. EVIDENCE APPENDIX

No evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 of this title or of any other evidence entered by the Examiner has been relied upon by Appellants in this Appeal, and thus no evidence is attached hereto.

X. RELATED PROCEEDINGS APPENDIX

Since Appellants are unaware of any related appeals and interferences, no decision rendered by a court or the Board is attached hereto.